VA QUERI

Quality Enhancement Research Initiative

Chronic Heart Failure

Palo Alto, CA

QUERI Fact Sheet **February 2008**

QUERI currently focuses on nine conditions that are prevalent and high-risk among veterans: Chronic Heart Failure, Diabetes, HIV/Hepatitis, Ischemic Heart Disease, Mental Health, Polytrauma and Blast-Related Injuries, Spinal Cord Injury, Stroke, and Substance Use Disorders.

Heart Failure

Heart failure is associated with a high mortality and poor quality of life. Heart failure currently affects nearly 5 million Americans, and hospital admissions for this condition have increased six-fold in the United States since 1970 (from 80,000 per year to more than 500,000) due, in part, to an aging population. Moreover, heart failure is the number one reason for discharge for veterans treated within the VA health care system.

Therapies that improve CHF, such as angiotensin converting enzyme (ACE) inhibitors, beta-blockers, aldosterone antagonists, and implantable cardioverter-defibrillators (ICDs), are available but are often underused. And although guideline compliance for the process of care measures used by the Joint Commission (including measurement of ejection fraction and use of ACE inhibitors) is high within the VA compared to other healthcare systems, vulnerable populations and those with comorbidities are likely to be under-treated. In addition, VA shows room for improvement on emerging performance measures such as appropriate use of beta-blockers. Thus, heart failure care is an ideal candidate for the QUERI program.

Chronic Heart Failure Quality Enhancement Research Initiative

The Chronic Heart Failure Quality Enhancement Research Initiative (CHF-QUERI) utilizes the QUERI 6-step process (see back page) to improve the quality of care and health outcomes of veterans with heart failure. Three goals have been identified for CHF-QUERI:

- Increasing the use of life-prolonging treatment,
- Reducing hospitalizations through patient-centered care coordination, and
- Preventing and identifying unrecognized heart failure.

CHF-QUERI Projects and Findings

Use of life-prolonging therapies

A performance measure for ACE inhibitors has existed for some time. Data on beta-blockers indicate that about 60% of candidates are treated with recommended beta-blockers. Accordingly, we have developed and successfully tested several interventions to improve beta-blocker use within the VA. CHF-QUERI's next task is to assist in the implementation of these interventions. Another project will analyze data from VA's External Peer Review Program to determine the number of candidates for aldosterone antagonist use, defibrillators, and cardiac resynchronization therapy. If these medications and devices are found to be underused, then relevant performance measures to optimize their use will be developed.

Appropriate use of ICDs

Defibrillators deserve special attention given their high cost and benefit. Several cost-effectiveness studies have estimated that ICD use is economically attractive for heart failure patients that qualified for randomized trials. However, the cost-effectiveness in specific sub-groups is poorly defined. CHF-QUERI is examining the current use of ICDs in the VA system and will determine the cost of care and the utility (frequency of discharges), with the goal of identifying sub-groups where ICDs can be targeted or avoided. In addition, each VA site will be surveyed to determine capacity for device placement. The dis-

The CHF-QUERI Executive Committee

Each QUERI Executive Committee is co-chaired by a research expert and a clinician. The research coordinator for CHF-QUERI is **Paul Heidenreich, MD, MS;** the clinical coordinator is **Barry Massie, MD.** This Executive Committee includes other experts in the field of heart failure and implementation science, including: Anita Deswal, MD; Mark Dunlap, MD; Stephen Ezeji-Okoye, MD; Gregg Fonarow, MD; Elaine Furmaga, PharmD; Peter Groeneveld, MD, MPH; Robert L. Jesse, MD, PhD; Harlan Krumholz, MD, MPH; Ileana Piña, MD; John Rumsfeld, MD, PhD; **Anju Sahay, PhD** (Implementation Research Coordinator); Martha Shively, RN, PhD; John Spertus, MD, MPH; and Douglas Wholey, PhD, MBA.

parity between the supply and demand for devices will be determined.

Heart Failure Provider Network: With the help of Dr. Robert Jesse, National Program Director for Cardiology, and VA's Patient Care Services, CHF-QUERI has initiated the Heart Failure Provider Network – a network of VA providers interested in improving heart failure care throughout the VA healthcare system. Currently, more than 350 providers (Chiefs of Cardiology, Chiefs of Medicine, Chiefs of Staff, clinicians, researchers, nurse practitioners, physician assistants, and others) from 157 VA Medical Centers and the wider VA healthcare system are participating in this network. This network is an important mechanism for the implementation of interventions that will improve the health and healthcare for veterans with heart failure. A major focus is on IHI's (Institute for Healthcare Improvement) Save 5 Million Lives Campaign to improve early follow-up after hospital discharge for patients with heart failure.

Heart failure registries

An important mechanism for identifying patients in need of treatment optimization is through registries. The goal of this project is to both improve guideline-recommended care and decrease hospitalization rates. Pilot registries will be created at each VA station through the use of local VA data, and health status will be documented through surveys in selected patients. Those patients found to have very poor health status – and those not on optimal treatment – will be identified for interventions that may include physician feedback, referral to cardiology clinic, disease management programs, and/or device placement. A national registry also will be created using administrative data, pharmacy data, laboratory data, and quality of care data.

Identification of unrecognized heart failure

CHF-QUERI will pilot test a screening program of limited echocardiography and marker testing in high-risk populations (e.g., veterans with diabetes and ischemic heart disease), and those with symptoms of heart failure that have been attributed to lung disease without a cardiac evaluation. The goal is to identify candidates for treatments (i.e., ACE inhibitors, beta-blockers) that are recommended to reduce the development and progression of heart failure.

Clinical reminders

The reminder system incorporated into the medical record (CPRS) has the potential to improve care for heart failure but is limited because the left ventricular ejection fraction (EF) is not available in electronic form. CHF-QUERI is working with VA's Patient Care Services and the Office of Information to identify a mechanism that will allow this information to be available through CPRS. CHF-QUERI also is testing a clinical reminder attached to the echocardiography report (where EF data is available). Initial data for ACE inhibitor and beta-blocker reminders are promising.

Collaboration with other VA organizations

CHF-QUERI has ongoing projects with Ischemic Heart Disease QUERI, and also is collaborating with VA's Office of Quality and Performance, Pharmacy Benefits Management, and Patient Care Services, including the Office of Care Coordination, to both understand and improve care for veterans with heart failure.

Additional CHF-QUERI Projects

There are several projects conducted by CHF-QUERI affiliates, such as developing a database that will identify a CHF clinician at each facility. These providers then will be asked to complete a survey to determine current needs for optimal CHF care. In addition, a database will be developed that highlights research projects on heart failure involving VA investigators.

THE QUERI PROCESS

QUERI utilizes a six-step process to diagnose gaps in performance and identify and implement interventions to address them:

1) Identify high-risk/high volume diseases or problems;
2) Identify best practices;
3) Define existing practice patterns and outcomes across VA and current variation from best practices;
4) Identify and implement interventions to promote best practices;
5) Document that best practices improve outcomes; and
6) Document that outcomes are associated with improved health-related quality of life.

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